

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of: Yoshiki TSUCHIYAMA et al.

Serial No. 10/580,211 Group Art Unit: 3653

Confirmation No. 1850

Filed: May 23, 2006 Examiner: SEVERSON, JEREMY R

For: AUTOMATIC PAPER FEEDER

APPEAL BRIEF UNDER 37 C.F.R. § 41.37

Mail Stop Appeal Brief-Patents

Commissioner for Patents

PO Box 1450

Alexandria, VA 22313-1450

Sir:

In a Notice of Appeal filed April 9, 2009, Applicants appealed the Examiner's October 9, 2008 Office Action finally rejecting claims 1-8. A Pre-Appeal Conference Request was filed concurrently with the Notice of Appeal. The Notice of Panel Decision from the Pre-Appeal Brief Review mailed on May 8, 2009, has indicated that the claim rejections remain for appeal, and set the date for filing the appeal brief, one-month from the Notice's date or two months from the date of the filing of the Notice of Appeal, whichever is later. Accordingly, the Appeal Brief due date is June 9, 2009. Submitted herewith are an Appeal Brief, and the requisite fees set forth in 37 C.F.R. § 41.20(b).

I. REAL PARTY IN INTEREST

The real party in interest is PFU Limited, the assignee of this application.

II. RELATED APPEALS AND INTERFERENCES

Appellants, appellant's legal representative, and the assignee do not know of any prior or pending appeals, interferences or judicial proceedings which may be related to, directly affect or be directly affected by, or have a bearing on, the Board's decision in this appeal.

III. STATUS OF CLAIMS

Claims 1-8 are rejected and on appeal.

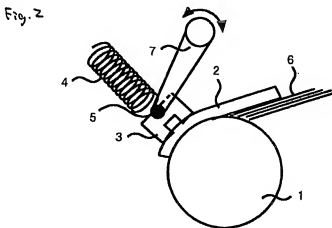
IV. STATUS OF AMENDMENTS

A Response after Final Rejection was filed on February 6, 2009. The February 6, 2009 Response contained no claim amendments. Applicants' arguments set forth in the February 6, 2009 Response were not found persuasive, and an Advisory Action was issued on March 3, 2009.

V. SUMMARY OF CLAIMED SUBJECT MATTER

A. Claim 1

Independent claim 1 is directed to "an automatic paper feeder supplying paper to an apparatus" (see e.g. FIGS. 1-4 of the application, FIG. 2 being reproduced below) including a separation pad (e.g., element 2 in FIGS. 1-4 of the application) and pad pressing means (e.g., element 3 in FIGS. 1-4 of the application).



According to claim 1, the separation pad presses the paper (e.g., element 6 in FIGS. 1-4 of the application) against a pick roller (e.g., element 1 in FIGS. 1-4 of the application) "to feed the paper one by one" (see paragraph [0035] on pages 8-9 of the specification).

Further, according to claim 1, the pad pressing means (e.g., element 3 in FIGS. 1-4 of

the application) applies pressure to the separation pad (e.g., element 2 in FIGS. 1-4 of the application) to press the separation pad (e.g., element 2 in FIGS. 1-4 of the application) against a surface of the pick roller (e.g., element 1 in FIGS. 1-4 of the application) (e.g., element 3 in FIGS. 1-4 of the application) (see paragraphs [0036]-[0037] on page 9 of the specification). The pad pressing means (e.g., element 3 in FIGS. 1-4 of the application) has a reverse U-shape to press the separation pad (e.g., element 2 in FIGS. 1-4 of the application) against the surface of the pick roller (e.g., element 1 in FIGS. 1-4 of the application) at two portions, a front portion and a rear portion, along a rotating direction of the pick roller thereof (see, e.g., paragraph [0038] of page 9 of the specification). The pad pressing means (e.g., element 3 in FIGS. 1-4 of the application) is configured to be rotatable back and forth with respect to the rotating direction of the pick roller about a fulcrum (e.g., element 5 in FIGS. 1-4 of the application) where pressure is applied to the pad pressing means (e.g., element 3 in FIGS. 1-4 of the application) (see paragraph [0041] on page 10 of the specification).

B. Claim 2

Claim 2, which depends from claim 1, specifies that the automatic paper feeder further includes "a rotating arm arranged so that the pad pressing means is rotatable about a predetermined position" (see e.g., element 7 in FIG. 2 of the application, which is reproduced above) (see also paragraph [0042] of the specification).

C. Claim 3

Claim 3, which depends from claim 1, specifies that the fulcrum (e.g., element 5 in FIGS. 1-4 of the application) where the pressure is applied to the pad pressing means (e.g., element 3 in FIGS. 1-4 of the application) "is arranged such as to be movable back and forth" (e.g., FIGS. 3 and 4 of the application) "depending on a type of the paper which is fed between the separation pad and the pick roller" (see paragraphs [0044] and [0045] of the specification).

D. Claim 4

Claim 4, which depends from claim 2 and indirectly from claim 1, specifies that the fulcrum (e.g., element 5 in FIGS. 1-4 of the application) where the pressure is applied to the pad pressing means (e.g., element 3 in FIGS. 1-4 of the application) "is arranged such as to be movable back and forth" (e.g., FIGS. 3 and 4 of the application) "depending on a type of the paper which is fed between the separation pad and the pick roller" (see paragraphs [0044] and [0045] of the specification).

E. Claim 5

Claim 5, which depends from claim 1, specifies that the fulcrum (e.g., element 5 in FIGS. 1-4 of the application) where the pressure is applied to the pad pressing means (e.g., element 3 in FIGS. 1-4 of the application) is arranged such as to be movable closer or farther to the pick

roller (e.g., element 1 in FIGS. 1-4 of the application) "depending on a thickness of the paper which is fed between the separation pad and the pick roller" (see, e.g., paragraphs [0015]-[0017] and paragraph [0046] on page 11 of the specification).

F. Claim 6

Claim 6, which depends from claim 2 and indirectly from claim 1 the fulcrum (e.g., element 5 in FIGS. 1-4 of the application) where the pressure is applied to the pad pressing means (e.g., element 3 in FIGS. 1-4 of the application) is arranged such as to be movable closer or farther to the pick roller (e.g., element 1 in FIGS. 1-4 of the application) "depending on a thickness of the paper which is fed between the separation pad and the pick roller" (see, e.g., paragraphs [0015]-[0017] and paragraph [0046] on page 11 of the specification).

G. Claim 7

Claim 5, which depends from claim 1, specifies that the automatic paper feeder further includes "a pressing unit applying the pressure to the fulcrum of the pad pressing means" (see e.g. the spring illustrated in FIGS. 1-4 of the specification, and paragraph [0027] of page 7 of the specification).

H. Claim 8

Independent claim 8 is directed to a method of adjusting pad pressing means (e.g., element 3 in FIGS. 1-4 of the application) pressing on a pick roller (e.g., element 1 in FIGS. 1-4 of the application) of an automatic paper feeder (see FIGS. 1-4 of the application) depending on thickness of paper fed between the pad pressing means and the pick roller, the pad pressing means pressing the pick roller in at least two distinct portions (see paragraph [0038] on page 9 of the specification). The method includes "rotating the pad pressing means" (e.g., element 3 in FIGS. 1-4 of the application) "about a fulcrum" (e.g., element 5 in FIGS. 1-4 of the application) "where pressure is applied to the pad pressing means" (e.g., element 4 in FIGS. 1-4 of the application) "to adjust pressures on the at least two distinct portions" (see e.g., paragraph [0041] on page 10 of the application). The method further includes "adjusting position" (e.g., element 4 in FIGS. 1-4 of the application) "of the fulcrum" (e.g., element 5 in FIGS. 1-4 of the application) to be "closer or farther from the pick roller" (see e.g. paragraph [0027] of page 7 and paragraph [0046] on page 11 of the specification).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The only ground of rejection to be reviewed on appeal is the rejection of claims 1-8 as allegedly being anticipated by U.S. Patent No 4,674,737 to Murayoshi (hereinafter "Murayoshi").

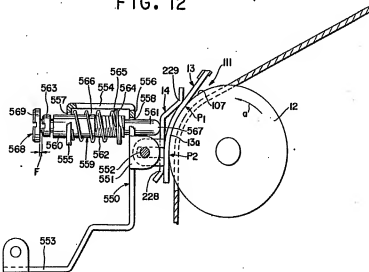
VII. ARGUMENT

A. Review of the Prior Art

Murayoshi discloses an automatic sheet feeding device including a sheet tray, a separation roller in contact with a lowermost sheet of the stack of sheets, a separation member including a free end portion maintained in contact with the separation roller, and a sheet pressing member pressing the sheets against the separation roller in a position upstream from where the separation member is in contact with the separation roller. (See Murayoshi's Abstract).

In rejecting the claims, the Examiner uses (or paraphrases) the language of claim 1 of the above-identified application, and attaches references from Murayoshi (see page 2 of the Office Action mailed October 9, 2009). FIG. 12 (which is reproduced below) of Murayoshi represents an automatic feeding device "characterized in that the pressing means for forcing the separation member 13 against the separation roller 12 and the regulating member for preventing the pressing means to move a distance greater than is necessary in a direction in which it moves away from the separation roller 12 are formed to have a compact size" (see col. 17, line 65 to col. 18, line 2 of Murayoshi). Murayoshi's automatic sheet feeding device includes a pressing plate 14 which presses on the separation member 13. The pressure is applied by a pressing rod 559 which is adjusted via a bracket 550 to transmit the force generated by the pressing spring 566.

FIG. 12



B. Rejection under 35 U.S.C. §102(b)

In the Office Action mailed October 9, 2009, claims 1-8 are rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Murayoshi. This position was reiterated in the Advisory Action issued on March 3, 2009 in response to Applicants' Request of Reconsideration filed on February 6, 2009.

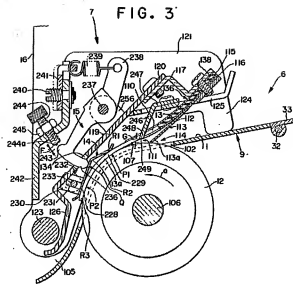
1. Murayoshi does not anticipate or render obvious "wherein the pad pressing means is configured to be rotatable back and forth with respect to the rotating direction of the pick roller about a fulcrum where pressure is applied to the pad pressing means" as recited in independent claim 1.

The outstanding Office Action indicates the pressing plate 14 in FIG. 12 as corresponding to the pad pressing means, and then asserts "the pad pressing means is configured to be rotatable back and forth with respect to the rotating direction of the pick roller about a fulcrum 552 where pressure is applied to the pad pressing means." See the last paragraph on page 2 of the outstanding Office Action.

However, element 552 in FIG. 12 of Murayoshi is not a fulcrum, and the pressing plate 14 is not configured to be rotatable around element 552. As described on col. 18, lines 3-7 of Murayoshi, "the pressing plate 14 is supported by a bar 552 which in turn is supported by a bent portion 551 of a bracket 550 for pivotal movement and movement toward and away from the separation roller 12 radially thereof." Thus, element 552 can be rotated away (being integrally formed with the bracket 550) from the pressing plate 14, but the pressing plate 14 is not rotatable around element 552 which is not a fulcrum.

Further, in the "Response to Arguments" section of the outstanding Office Action, the Examiner asserts that "a description of a similar embodiment explicitly indicates that the fulcrum is loosely inserted in the slots to allow pivotal movement. See col. 7, lines 36-45." The indicated portion of Murayoshi and corresponding FIG. 3 are reproduced below:

Meanwhile, the support member 119 is formed, as shown in FIG. 3, at an opposite end portion with a pair of upright portions 23 (only one is shown) which extend downwardly to support a guide shaft 233 which is loosely inserted in the slots 231 formed in the support portions 230. This structural arrangement permits the pressing plate 14 to move in pivotal movement about the guide shaft 233 and allows same to move radially of the separation roller 12 within a range restricted by the length of the slots 231.



The arrangement illustrated in FIG. 3 and described in the indicated portion of Murayoshi does not anticipate "the pad pressing means is configured to be **rotatable back and forth with respect to the rotating direction of the pick roller about a fulcrum** where pressure is applied to the pad pressing means." The pressure applying arm 15 in FIG. 3 applies pressure to the pressing plate 14 in point Q. Murayoshi does not teach or suggest a fulcrum being located in point Q or the pressing plate 14 being rotatable back and forth with respect to the rotating direction about the point Q.

Further in the "Response to Arguments" section, the Examiner asserts "the fulcrum 552 must be freely movable in order for the pressing force at point P2 to be adjustable." Applicants respectfully submit that element 552 in FIG. 12 is not a fulcrum (see above) and that having an adjustable force applied at P2 is irrelevant relative to the above-identified feature that Murayoshi fails to anticipate.

2. Murayoshi does not anticipate or render obvious "the pad pressing means having a reverse U-shape to press the separation pad against the surface of the pick roller at two portions" as recited in claim 1.

The pressing plate 14 in Murayoshi has a V shape and not a U-shape. A person of ordinary skill in the art would recognize that a U-shaped element as opposed to a V-shaped element has a middle portion at a different angle than each of the straight ending portions, the middle portion being located between the two ending portions.

3. Murayoshi does not anticipate or render obvious “a rotating arm arranged so that the pad pressing means is rotatable about a predetermined position” as recited in claim 2.

In the outstanding Office Action, the Examiner indicates the bent portion 551 of the bracket 550 as corresponding to the recited rotating arm (see page 3 of the outstanding Office Action). Although the bracket 550 is capable of a “pivotal movement and movement toward and away from the separation roller 12 radially thereof, the pressing plate 14 are not consequently “rotatable about a predetermined position” as recited in claim 2. In contrast, in the non-limiting embodiment illustrated in FIG. 2 of the application, the rotating arm 7 makes the pad pressing means to rotate away from the pick roll 1 therein (see also paragraph [0042] of the specification).

4. Murayoshi does not anticipate or render obvious “the fulcrum where the pressure is applied to the pad pressing means is arranged such as to be movable back and forth depending on a type of the paper which is fed between the separation pad and the pick roller” as recited in claims 3 and 4.

In the outstanding Office Action, the Examiner supports his position that Murayoshi anticipates this feature recited in claims 3 and 4, respectively, by stating “[the] movement of bracket 550 causes movement of fulcrum 552” and indicating col. 18, lines 3-7 of Murayoshi (which have been reproduced above).

Even if for the sake of the argument one would consider the bar 552 being a fulcrum (which in fact Applicants maintain it is not as argued above), in Murayoshi the pressure on the pressing plate is not applied at element 552 (see, col. 18, lines 31-36 and 49-62 and FIG. 13 of Murayoshi). Thus, Murayoshi does not anticipate or render obvious that the fulcrum is the location where the pressure is applied to the pad pressing means.

5. Murayoshi does not anticipate or render obvious “the fulcrum where the pressure is applied to the pad pressing means is arranged such as to be movable closer or farther to the pick roller depending on a thickness of the paper which is fed between the separation pad and the pick roller” as recited in claims 5 and 6.

In the outstanding Office Action, the Examiner supports his position that Murayoshi anticipates this feature recited in claims 5 and 6, respectively, by making identical statements and citing the same portion of Murayoshi as for claim 3 and 4 (see page 4 of the outstanding Office Action). In view of the above-presented arguments, Murayoshi does not anticipate the features recited in claims 5 and 6 because (1) element 552 is not a fulcrum and (2) element 552

is not the location where the pressure is applied to the pad pressing means (i.e. the pressing plate 14).

6. Murayoshi does not anticipate or render obvious “a pressing unit applying the pressure to the fulcrum of the pad pressing means” as recited in claim 7.

In the outstanding Office Action, the Examiner supports his position that Murayoshi anticipates this feature recited in claim 7 by indicating element 550. However, the bracket 550 does not serve to apply pressure in Murayoshi's device. Additionally the pressure applied to the pressing plate 14 in Murayoshi is not applied to a fulcrum of the pad pressing means.

7. Murayoshi does not anticipate or render obvious “rotating the pad pressing means about a fulcrum where pressure is applied to the pad pressing means” as recited in claim 8.

Contrary to the position expressed in the outstanding Office Action, as argued and illustrated above, the pressing plate 14 in Murayoshi does not rotate around the bar 552, which is NOT a fulcrum.

8. Advantages of the claimed inventions over the applied prior art

As described on page 5 of the specification, the claimed inventions have the advantage that when the paper stacked in the stacker or the like is fed into an apparatus by the pick roller, it becomes possible to reliably separate the paper one by one and feed it into the apparatus irrespective of the type of paper.

The claimed pad pressing means is configured to be rotatable back and forth with respect to the rotating direction of the pick up roller, about a fulcrum. The pressure is applied to the fulcrum to press the pressing pad means, yielding a frictional load in the fulcrum. Since the pressing pad means rotate around the fulcrum which is where the pressure is applied to the pad pressing means, the frictional load can be reduced and the pressure can be applied to the fulcrum in a stable manner.

In Murayoshi, the load arise in the bar 552 and the pressure is applied at the point 567, which is shifted from the position if the bar 552. Therefore, it is impossible to reduce the load in the bar 552 of Murayoshi.

VIII. CONCLUSION

Applicants submit that claims 1-8 patentably distinguish over the prior art. Reversal of the Examiner's rejection is respectfully requested.

Respectfully submitted,

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Date: June 9, 2009

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IX. THE CLAIMS APPENDIX

1. An automatic paper feeder supplying paper to an apparatus, comprising:

a separation pad, pressing the paper against a pick roller so as to feed the paper one by one; and

pad pressing means, applying pressure to the separation pad so as to press the separation pad against a surface of the pick roller, the pad pressing means having a reverse U-shape to press the separation pad against the surface of the pick roller at two portions, a front portion and a rear portion, along a rotating direction of the pick roller thereof, and the pad pressing means being configured to be rotatable back and forth with respect to the rotating direction of the pick roller about a fulcrum where pressure is applied to the pad pressing means.

2. The automatic paper feeder according to claim 1, further comprising: a rotating arm arranged so that the pad pressing means is rotatable about a predetermined position.

3. The automatic paper feeder according to claim 1, wherein the fulcrum where the pressure is applied to the pad pressing means is arranged such as to be movable back and forth depending on a type of the paper which is fed between the separation pad and the pick roller.

4. The automatic paper feeder according to claim 2, wherein the fulcrum where the pressure is applied to the pad pressing means is arranged such as to be movable back and forth depending on a type of the paper which is fed between the separation pad and the pick roller.

5. The automatic paper feeder according to claim 1, wherein the fulcrum where the pressure is applied to the pad pressing means is arranged such as to be movable closer or farther to the pick roller depending on a thickness of the paper which is fed between the separation pad and the pick roller.

6. The automatic paper feeder according to claim 2, wherein the fulcrum where the pressure is applied to the pad pressing means is arranged such as to be movable closer or farther to the pick roller depending on a thickness of the paper which is fed between the separation pad and the pick roller.

7. The automatic paper feeder according to claim 1, further comprising a pressing unit applying the pressure to the fulcrum of the pad pressing means.

8. A method of adjusting pad pressing means pressing on a pick roller of an automatic paper feeder depending on thickness of paper fed between the pad pressing means and the pick roller, the pad pressing means pressing the pick roller in at least two distinct portions, the method comprising:

rotating the pad pressing means about a fulcrum where pressure is applied to the pad pressing means to adjust pressures on the at least two distinct portions; and
adjusting position of the fulcrum closer or farther from the pick roller.

X. EVIDENCE APPENDIX

Not applicable.

XI. RELATED PROCEEDING APPENDIX

Not applicable.